REV	ECO #	BY	DATE	CHK	REVISION
A	7193	BH	6.15.00	JEF	RELEASE

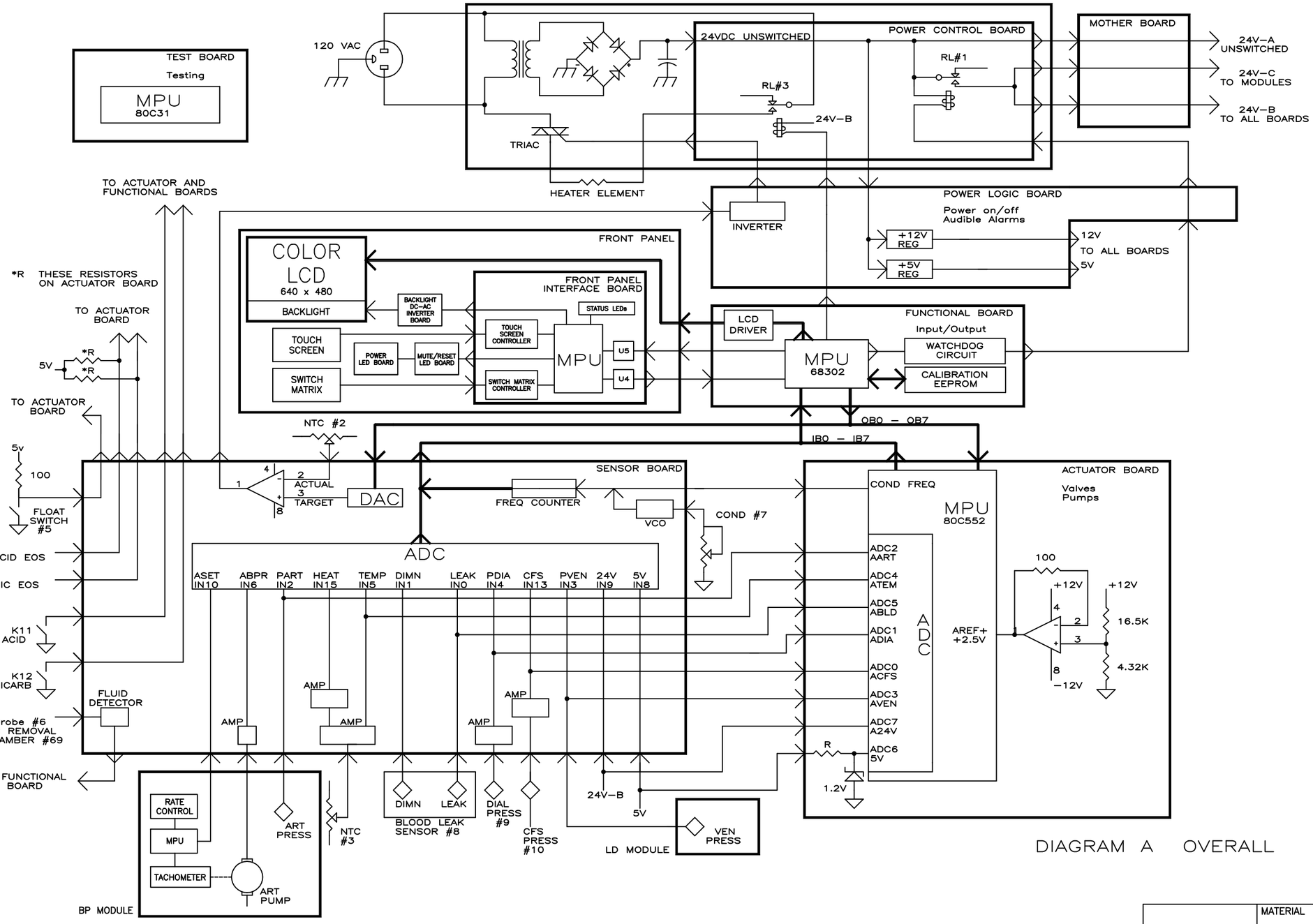

DIAGRAM A OVERALL

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SCALE
NONE

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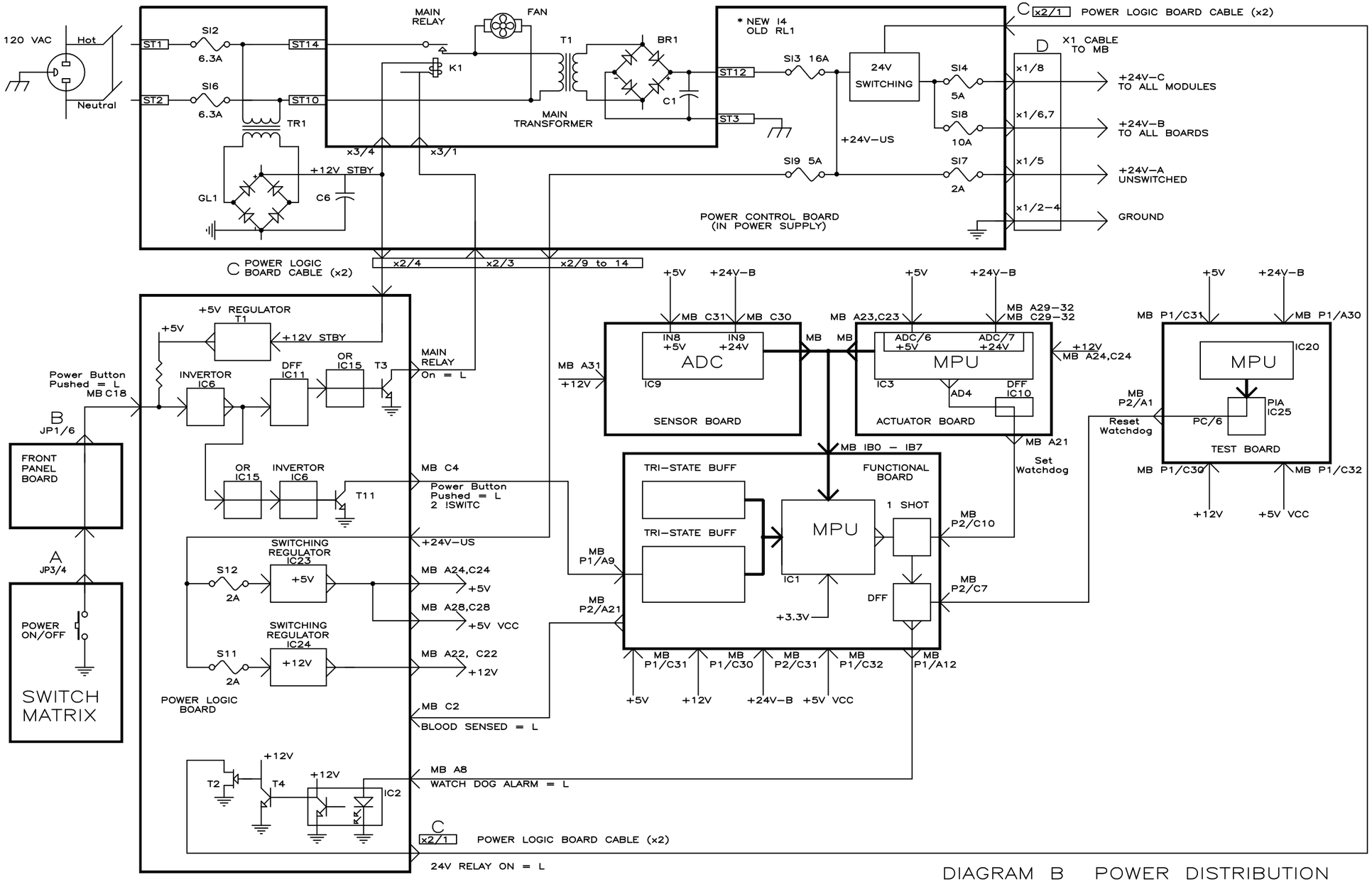

DIAGRAM B POWER DISTRIBUTION

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SHEET 2 OF 11

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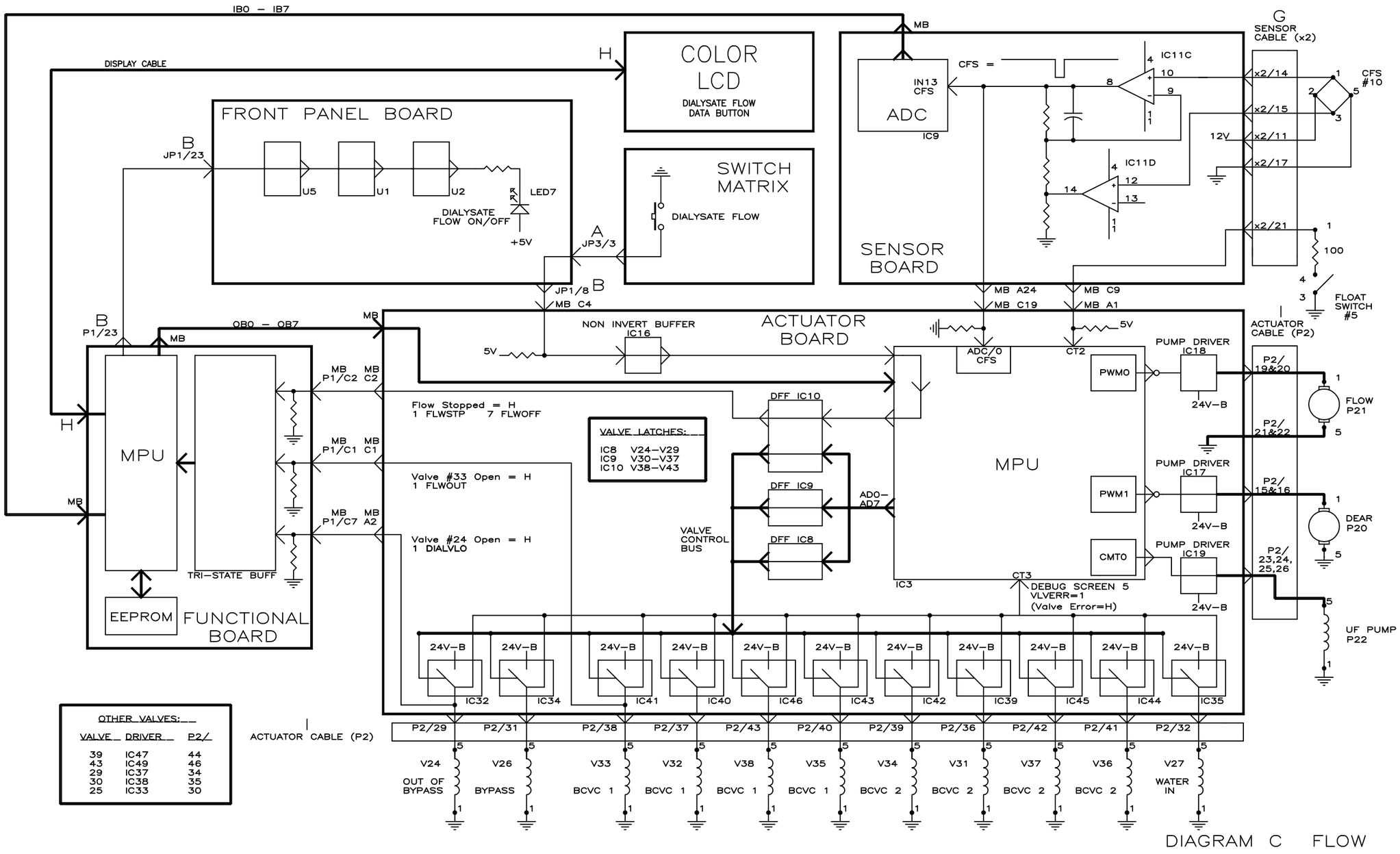

DIAGRAM C FLOW

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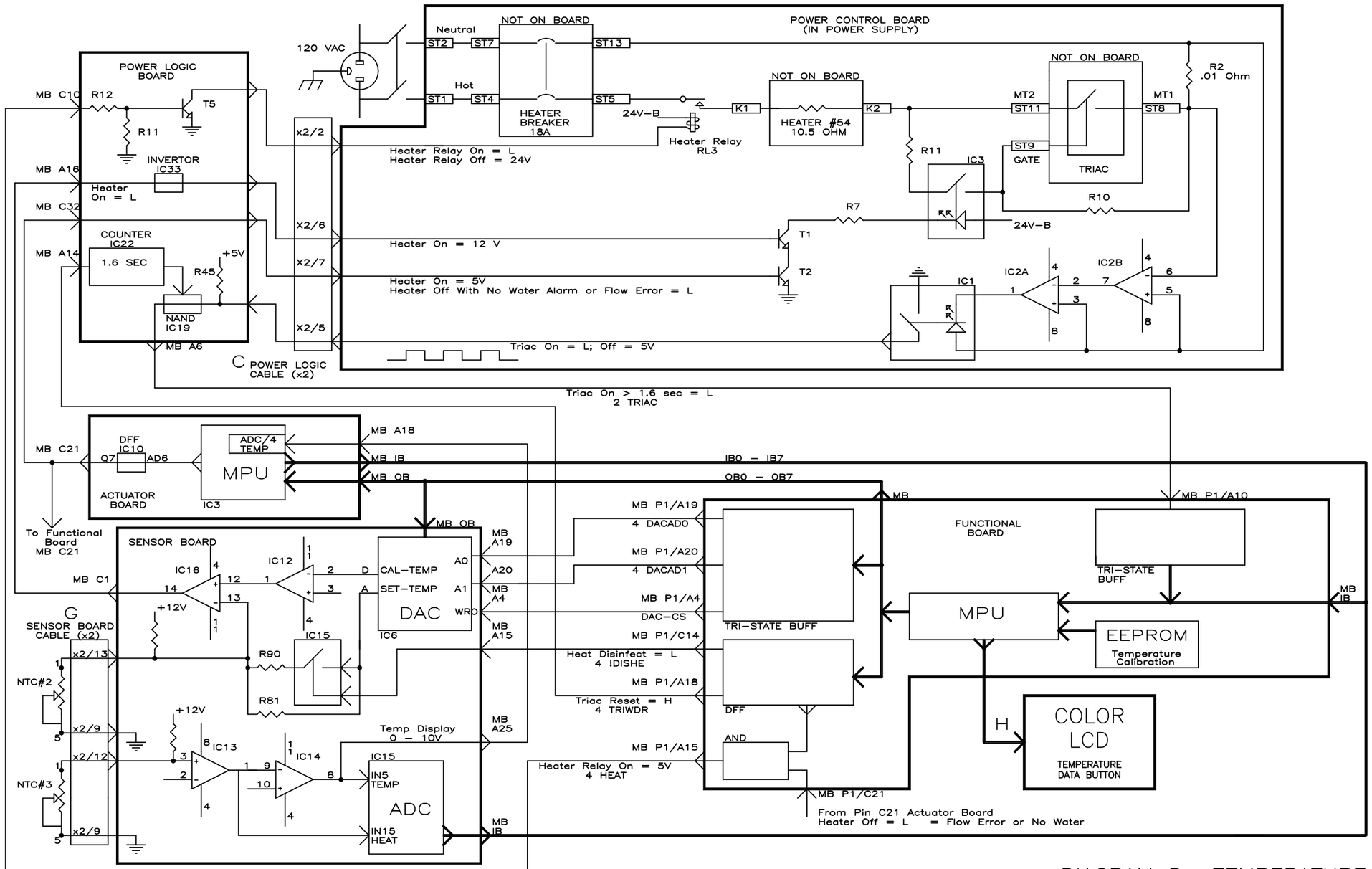

DIAGRAM D TEMPERATURE

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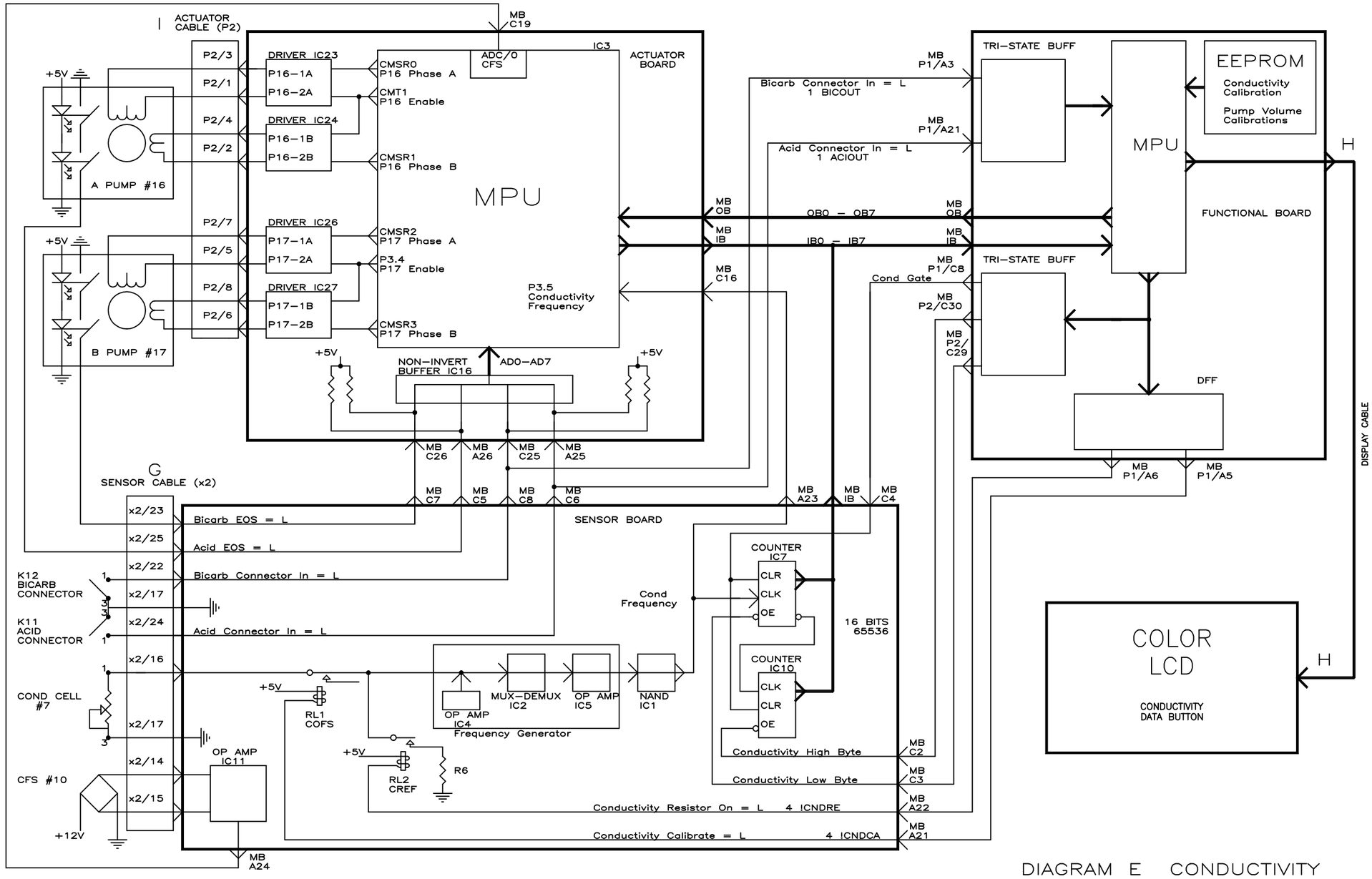

DIAGRAM E CONDUCTIVITY

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DIALYSATE IN
BLOOD LEAK SENSOR #8
DIMNESS
BLOOD LEAK
DIALYSATE OUT
Dialysate Press #9
G
SENSOR CABLE (x2)
SENSOR BOARD
IC9
ADC
X2/17
x2/8
x2/10
x2/11
x2/7
x2/6
OP AMP IC11
OP AMP IC5
T1
+12V
IN4 P-DIAL
IN1 DIMN
IN0 BL
IN3 P-VEN
IN2 P-ART
IN10 ART SET
IN6 ART BPR
IN5 TEMP
IN15 HEAT
OP AMP IC14B
OP AMP IC13
OP AMP IC14
COUNTERS IC7 & 10
x2/12
x2/16
NTC#3
COND CELL #7
LEVEL DETECTOR MODULE
Venous Press Transducer
Venous Line Clamp
Optical Detector
Level Switch
Vent Valve
HH Level Detector Alarm = L (Air In Blood)
GG Close Venous Line Clamp = L
FF Blood Sensed = L (Patient Present)
EE Open Vent Valve = H
DD Level Switch Held Up = H
LD/14
LD/4
LD/8
LD/3
LD/5
LD/1
MB A32
MB A27
MB A12
MB A28
ARTERIAL BLOOD PUMP MODULE
Arterial Press Transducer
Rate Control
MPU
Tach-ometer
Blood Pump
CC Special Control = H (With Level Switch Held Up)
BB Stop Blood Pump = L
AA Blood Pump Stopped = L (After 15 or 30 Sec Delay)
BP/3
BP/1
BP/8
BP/7
BP/14
BP/10
MB IB
ACTUATOR BOARD
7 ACTBLD
FF
MB A4
DRIVER
DRIVER
DRIVER
UF PUMP #22
V26
V24
MB IB
MB OB
MB C20
MB A2
UF Pump Stroke = H
V24 Open = H
MB IB
MB OB
MB P1/A29
MB P1/C7
1 UFPULS
1 DIALVLO
FUNCTIONAL BOARD
AA MB P1/C27 2 !BPSTP
BB MB P1/C18 3 !BPSTP
CC MB P1/C19 3 BPSPEC
DD MB P1/C4 2 LD UP
EE MB P1/C15 3 VNTVLO
FF MB P1/C23 1 !BLOOD
GG MB P1/C16 3 CLAMPO
HH MB P1/C24 2 !LD AL
MB P1/C25 2 !HEPAL
Heparin Alarm = L
4 WARNSO 4 ALM SO
MB P1/A14
MB P1/A13
MB P1/A12
MB P2/A21
Warning Sound On=H
Alarm Sound On=H
Watch Dog=L
Blood Sensed=L
HEPARIN MODULE
L
HEP/4
MB A10
MB C8
MB A8
MB C2
P4/3
P4/4
ALARM SPEAKER
POWER LOGIC BOARD
T2
MB A12
B
H
COLOR LCD
ARTERIAL PRESSURE
VENOUS PRESSURE
TRANSMEMBRANE PRESSURE
CONDUCTIVITY
TEMPERATURE
+24V-B
+24V-C
MAIN TRANSFORMER
+24V
RL1
POWER CONTROL BOARD
POWER SUPPLY
FRONT PANEL BOARD
U1
MPU
U2
U3
SVS
FLOW
PRIME
OVERRIDE
STAT/DEFLATE
HEPARIN
UF
BLOOD LEAK
AIR DETECTOR
BYPASS
MINOR
+5V
N
N
MUTE/RESET LED BOARD
RESET
MUTE
O
POWER LED BOARD
POWER

DIAGRAM F MONITORS AND ALARMS

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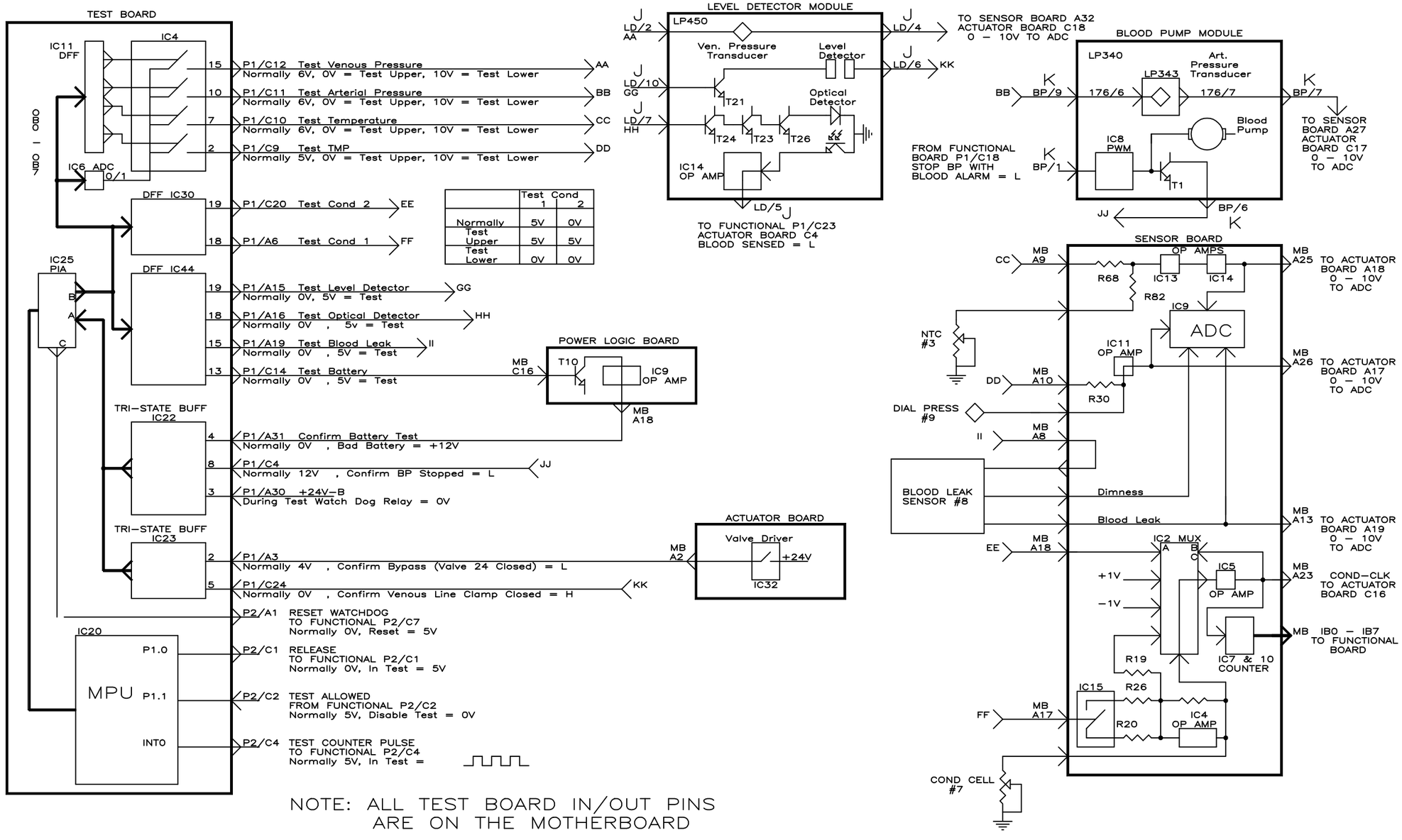

NOTE: ALL TEST BOARD IN/OUT PINS ARE ON THE MOTHERBOARD

DIAGRAM G TESTING

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REV	ECO #	BY	DATE	CHK	REVISION
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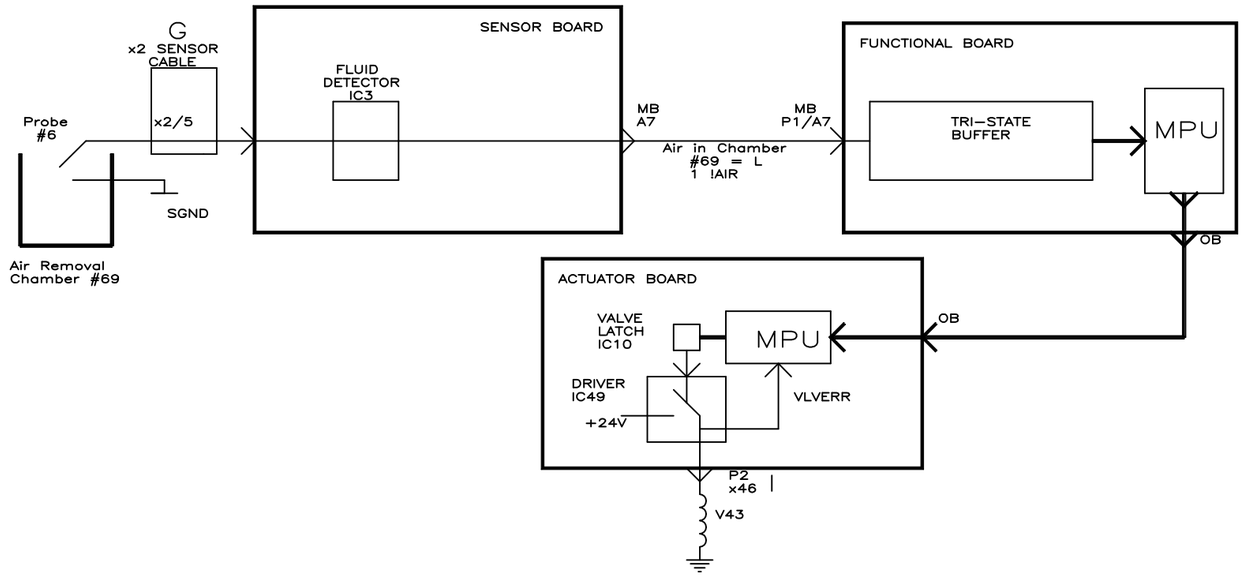

DIAGRAM H FILL PROGRAM

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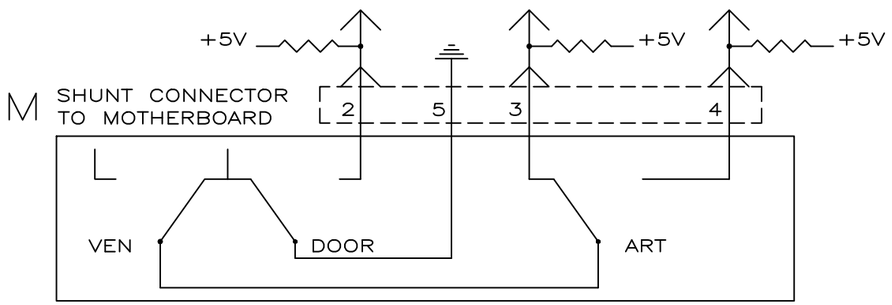
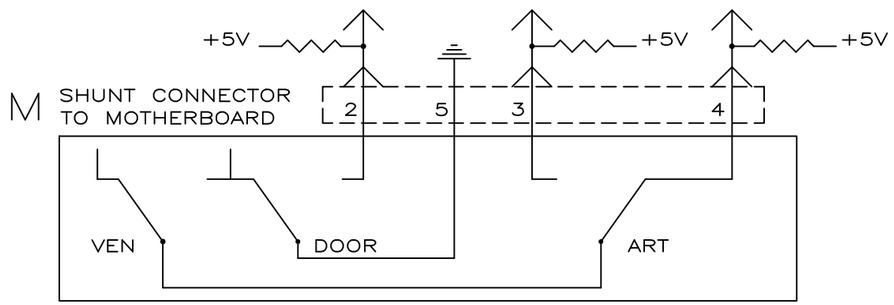
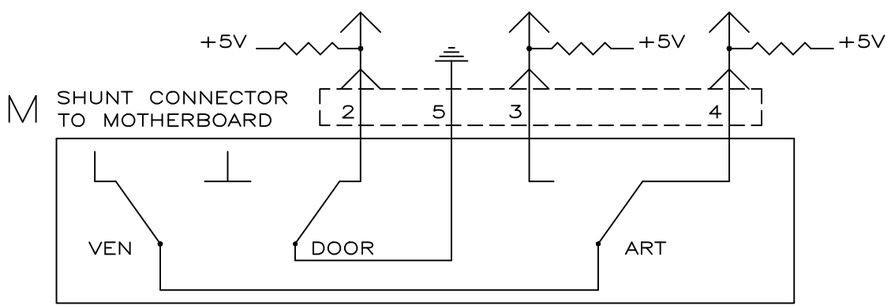
CONNECTOR P8 TO MOTHERBOARD
Pin 1 = Not Connected
Pin 2 = To functional board P1/C6, actuator board C6
Pin 3 = To functional board P1/A30, actuator board A5
Pin 4 = To functional board P1/A31, actuator board C5
Pin 5 = Ground



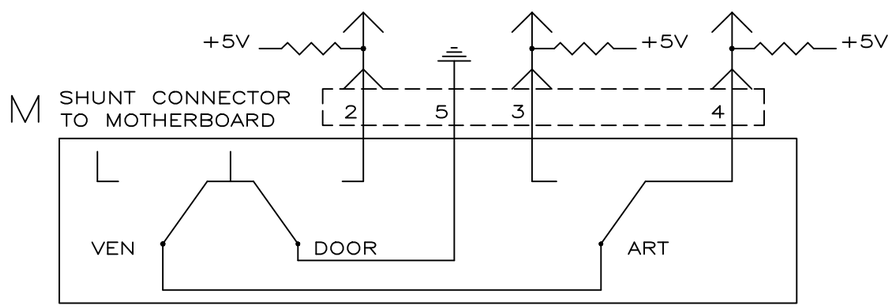
Both lines in shunt; shunt door closed
Pin 2 = +5V (Door closed)
Pin 3 = 0V (Both lines in shunt)
Pin 4 = +5V (Emptying not active)



Neither line in shunt; shunt door closed
Pin 2 = +5V (Door closed)
Pin 3 = +5V (Both dialysate lines not in)
Pin 4 = +5V (Emptying not active)



Shunt door open
Pin 2 = 0V (Door open)
Pin 3 = +5V (Both dialysate lines not in)
Pin 4 = +5V (Emptying not active)



Venous line in shunt, arterial line not in, shunt door closed
Pin 2 = +5V (Door closed)
Pin 3 = +5V (Venous line in, arterial line not in)
Pin 4 = 0V (Emptying activated)

DIAGRAM I SHUNT DOOR SWITCH CONFIGURATIONS

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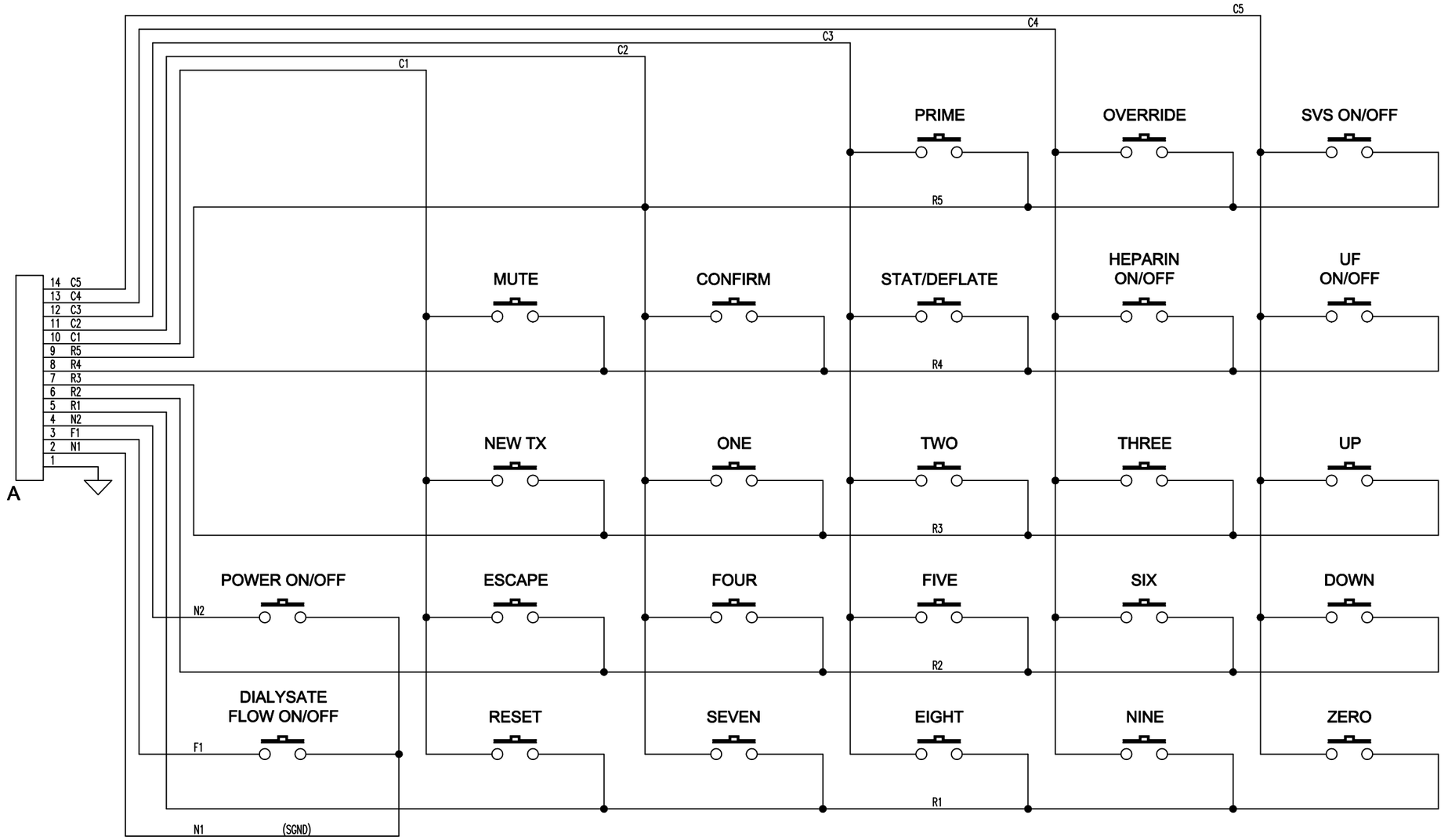

DIAGRAM J FRONT PANEL SWITCH MATRIX

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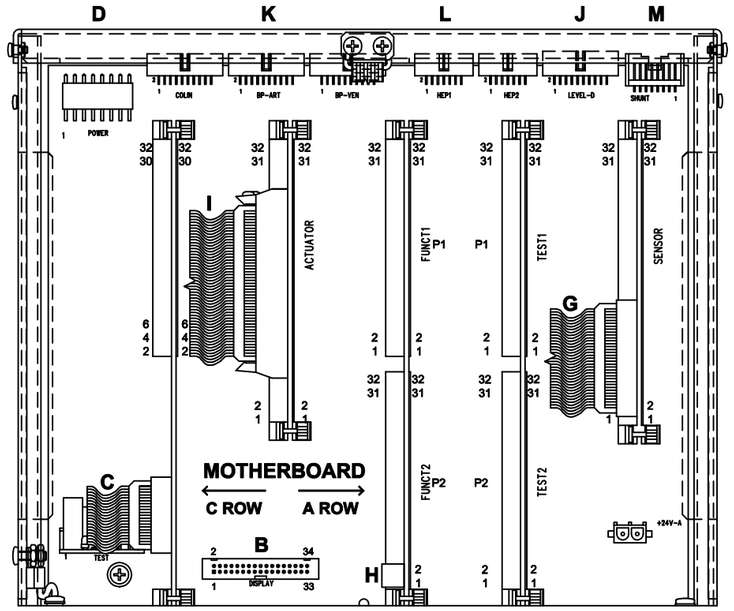
CARD CAGE
LEFT TO RIGHT:
POWER LOGIC BOARD
ACTUATOR BOARD
FUNCTIONAL BOARD
TEST BOARD
SENSOR BOARD



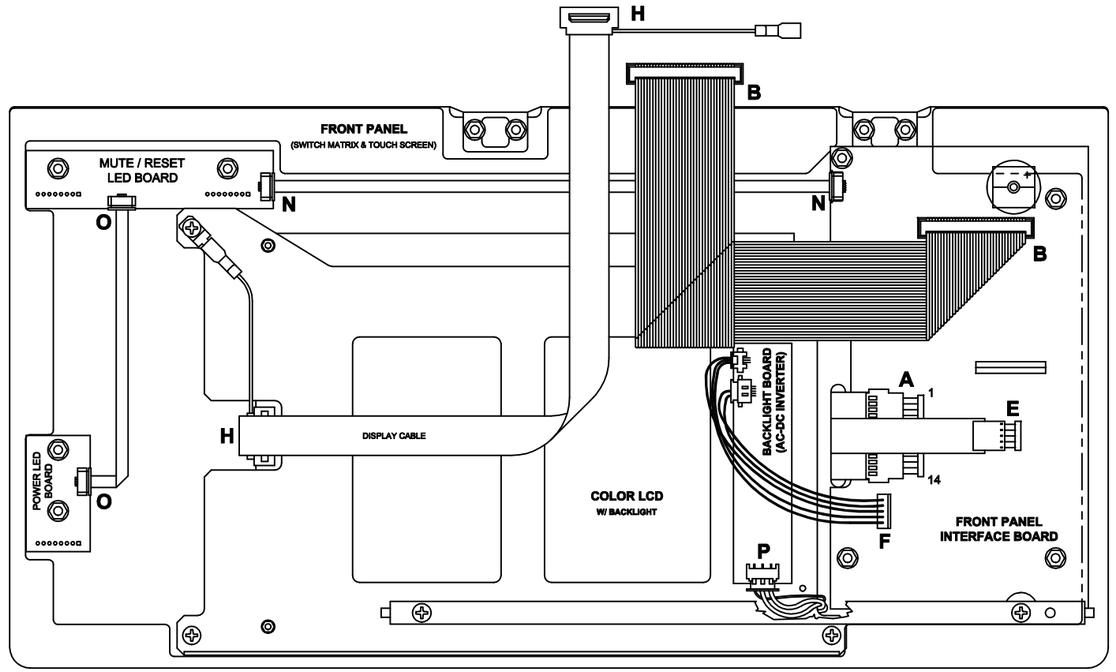


DIAGRAM K CARD CAGE AND DISPLAY BOARD

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